REMARKS

Claims 2, 5-11, and 26 are pending in the application. Applicant requests reconsideration in view of the Remarks submitted herewith.

Claims 2, 5-11, and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wolbarst in view of Coe (US 5,305,365). For an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

The Examiner asserts that Wolbarst describes the characteristics of an x-ray mammography and specifically teach that they employ a molybdenum target with a focal spot of 0.1 mm and a minimum source to image distance of 40 cm. The Examiner also asserts that Coe teaches that a mammography may be operated with a source to image distance of 76 cm, and with a magnification of 1.5 as recommended by Wolbarst, the source to object distance would be 50 cm. Applicant respectfully traverses.

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992); MPEP § 2143.01. There is no teaching in the cited art to combine the references in an attempt to produce the claimed invention. In fact, the teachings of Coe specifically teach away from combining its teachings with Wolbarst.

Wobarst teaches that a minimum source-to-image distance of 40 cm and a magnification of 1.5 with a focal spot size of 0.1 mm; however, Wolbarst teaches nothing about a source-to-object distance. Coe merely teaches about a source-to-distance of 76 cm, and does not teach about a focal spot size, a magnification of 1.5, and the source-to-distance of 50 cm. In fact, Coe

expressly teaches away from magnification. As disclosed at column 5, lines 16-17 and column 6, lines 38-39, Coe teaches that the patient is caused to lean forwardly for placement of her breast on the tilted film receptor. That is, Coe expressly teaches an object-to-detector distance (R2) of 0 cm, which means that Coe teaches that a mammography is to be operated with a magnification of 1.0 (R2=0). There is nothing in Coe that suggests any other object-to-detector distance or magnification. Accordingly, it would not have been obvious for an ordinarily skilled person in the art to combine Wolbarst and Coe to reach the claimed invention.

Moreover, even if Wolbarst and Coe are combined, which they cannot be, the references do not teach or suggest all of the limitations: Claims 2, 5-11, and 26 include the following limitation: "setting a distance R1 between the X-ray tube and an object of a breast so as to be within a range defined by the following formula: $(D-7)/200\ m \leq R1 \leq 5\ m$." Accordingly, setting a distance R1 as defined by a formula that requires the source-to-object distance to be based on the focal spot size D.

There is nothing in Wolbarst that teaches or suggests how to determine the distance of R1. Wolbarst merely teaches a minimum source to image receptor distance of 40 cm. Moreover Coe also merely teaches source to image distance of 76 cm and teaches nothing about the size of a focal spot of the x-ray tube and about how to determine the distance R1. Thus, even if Wolbarst and Coe are combined, it is not obvious to determine the distance R1 between an x-ray tube and an object of a breast in accordance with a size D of a focal spot of the x-ray tube with the formula of $(D-7)/200\ m \leq R1 \leq 5\ m$.

In addition, the Examiner asserts that as long as Wolbarst and Coe define a set of parameters that satisfies the formula, then the claims must be rejected. However, the Examiner has not found two references that define the set of parameters because there is nothing in Wolbarst or Coe that teach about the source to object distance of 50 cm. Accordingly, even if taking Wolbarst and Coe in combination, it would not have been obvious to conceive the invention.

Thus, the combination of Wolbarst and Coe do not teach or suggest all of the limitations of claims 2, 5-11, and 26. Moreover, there is no motivation to combine Wolbarst and Coe. Applicant respectfully requests that the rejection be withdrawn.

Moreover, the requirement for a determination of obviousness is that "both the suggestion and the expectation of success must be founded in the prior art, not in applicant's

disclosure." *In re Dow Chem.*, 837 F.2d 469, 473, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988) (emphasis supplied). An Examiner thus cannot base a determination of obviousness on what the skilled person in the art might try or find obvious to try. Rather, the proper test requires determining what the prior art would have led the skilled person to do, with a reasonable expectation of success.

In this case, none of the references teaches that there can be success with magnification mammography. In Coe, there is no teaching of magnification mammography. In Wolbarst, the reference teaches magnification mammography by a factor of 1.5 or 2 for a more detailed examination of microcalcifications. See page 221, right column lines 20-25. However, Wolbarst also explicitly teaches that the unsharpness of the image due to penumbra increases as the magnification of magnification mammography increases. See Figure 22-11 on page 197.

Moreover, as previously submitted in the Honda Declaration, which was submitted with the last response, with magnification mammography of the present invention, edge portions of contours of the objects of the Inventive example becomes clearer because there is a higher sharpness than the Comparative Example. In particular, the Declaration showed the differences between Applicant's present invention and the references by submission of Comparative example I, which represents Coe, Comparative example II, which represents the combination of Wolbarst and Coe (which assumes that these two references can be combined, however, Applicant continues to maintain that they cannot be combined), and Inventive example, which represents the an embodiment of the present invention.

As stated in the Test results, by magnification radiography, a more detailed examination of the x-ray can be conducted in Comparative example II than Comparative example I; however, as Wolbarst explicitly teaches, the unsharpness of image due to penumbra increases in Comparative example II.

In contrast, with the radiographing method of an embodiment of the present invention, edge portions of contours of the objects in the Inventive example becomes clearer because there is a higher sharpness than Comparative example II. See the Declaration.

Accordingly, for this additional reason, claims 2, 5-11, and 26 are patentable over Wolbarst and Coe. Applicant respectfully requests that the rejection be withdrawn.

Applicant further maintains that the Examiner has used an improper standard in arriving at the rejection of the above claims. In applying Section 103, the U.S. Court of Appeals for the

Federal Circuit has consistently held that one must consider both the invention and the prior art "as a whole," not from improper hindsight gained from consideration of the claimed invention. *See Interconnect Planning Corp. v. Feil*, 227 U.S.P.Q. 543, 551 (Fed. Cir. 1985) and cases cited therein. According to the *Interconnect* court

> "[n]ot only must the claimed invention as a whole be evaluated, but so also must the references as a whole, so that their teachings are applied in the context of their significance to a technician at the time - a technician without our knowledge of the solution." *Id.*

In this case, the Examiner has plucked certain teachings from two separate references and states that because he has found all of the parameters of Applicant's formula that the two references teach the invention. Applicant respectfully traverses. Instead, the Examiner has used improper hindsight and has used Applicant's disclosure that provides the necessary teaching. It is improper for the Examiner to use Applicant's specification as a road map to reject the claims. Thus, the claims are patentable over Wolbarst and Coe. Accordingly, Applicant respectfully requests that this rejection be withdrawn.

In view of the foregoing, it is respectfully submitted that the instant application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued. If the Examiner believes that a telephone conference with Applicant's attorneys would be advantageous to the disposition of this case, the Examiner is cordially requested to telephone the undersigned.

In the event the Commissioner of Patents and Trademarks deems additional fees to be due in connection with this application, Applicant's attorney hereby authorizes that such fee be charged to Deposit Account No. 06-1130.

Respectfully submitted,

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May 7, 2004